THE RARE VASCULAR PLANTS OF PRINCE EDWARD ISLAND

Robin Day and Paul M. Catling

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OF

PRINCE EDWARD ISLAND

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ABSTRACT

Information on range, habitat and regional status is provided for 191 plants that are rare on Prince Edward Island. Distribution maps for each rare species are included along with a list of locations on PEI. Documentation supporting rare status is also provided. Six species present on the island are considered rare in Canada, and 78 are rare in one or more adjacent provinces. The rare island flora includes some species that are universally rare as well as four species of sandy shores that are endemic to the Gulf of St. Lawrence region, but the majority of rare plants are species near the edge of their ranges. Thirty-four percent of the native flora is rare, and this is a relatively high percentage, but not surprising since over 90% of the natural landscape has been altered. The Hillsborough estuary, West Point, East Point and the sandy islands and strands of the north shore all harbour significant concentrations of rare plants. This study provides the basis for a systematic approach to the protection of the rare plants of Prince Edward Island, but it also identifies the need for more work to investigate and document rarity.

INTRODUCTION

Since protection of natural resources is largely a matter for provincial jurisdictions, rare plant lists have been prepared now for most Canadian provinces and territories. With current vascular plant inventories, these lists enable rare species and their habitarts to be taken into account in land-use planning. They also enable an evaluation of the extent to which a system of protected reserves is adequate (by checking those rare species officially listed with those that exist in fully protected habitats). Priorities for protection sometimes depend upon status in adjacent areas, so that it is important for all provinces to have such lists so that comparisons can be made.

This is the 12th in the series of rare plant compilations for Canadian provinces and territories, completed as part of the Rare and Endangered Plants Project of the Canadian Museum of Nature (Argus and Pryer 1990).

A. Definitions

A "rare" plant is one that exists in low numbers or in very restricted areas in the region under consideration. Rare species include those that are sparse over an extensive geographic area, those that are restricted to a very limited geographic area (but may be locally common), and those that are sparse due to climatic and other constraints. Species that are rare on the edge of their range are often referred to as "peripheral", and they are sometimes of considerable importance in being genetically different from the plants that occur in the main portion of the species range where it is common. A "taxon" (plural "taxa") is any taxonomic grouping. For example the taxon *Lechea maritima* (a species) includes subordinate taxa, one of which is the variety *subcylindrica*. Concern over the protection of rare plants is extended to the infraspecific taxa, i.e. subspecies and varieties, but infraspecific taxa are not recognized in all species. Consequently a list of rare plants will include species, subspecies and varieties, and if some of the species contain more than one infraspecific taxon, then the list of rare taxa will be longer than the list of species.

The word "endemic" refers to taxa that are confined to a relatively small geographic area.

B. Preparation of the list

There has been only one comprehensive study aimed at cataloguing the flora of Prince Edward Island. This is the work of Erskine (1960), originally published by Agriculture Canada in 1960, and reissued with an introductory update by Catling *et al.* in 1985. Erskine's 1952-53 survey resulted in 1800 numbered collections. Prior to that the most extensive collection was that of M. L. Fernald and colleagues made in 1912 and 1914 which included 713 numbered collections. No other Canadian province has had such a limited botanical field survey, and no other Canadian province relies so heavily on the work of a single botanist for information on its flora. Fortunately Erskine's (1960) work is very good, but nevertheless, it was not designed specifically to determine which species are rare, and consequently it is not entirely reliable in determining rarity. Common plants collected infrequently may appear to be rare, and rare plants that always exist in small populations, but are widespread and collected frequently, may appear to be common. Furthermore Erskine's work is

neither complete nor up-to-date, because it represents the efforts of a single individual some 30 years ago.

Nevertheless, the compilation of a rare plant list for Prince Edward Island has to start somewhere, and a less than ideal information base cannot be allowed to be an obstacle. It should be understood, however, that that the present list is largely a first approximation. There are probably some cases in which species that we did not consider to be rare on the basis of 1960 information, are in fact rare due to destruction of habitat since then. There are also undoubtedly rare native vascular plants on the island that have not been discovered yet. As additional information becomes available, some of the rare species listed here will probably be excluded from the list. There is much work to be done to produce a fully reliable and up-to-date flora, and the study of a flora is to a large degree an ongoing process as the status and names of plants change over time. The present list builds largely on the work of Erskine, but includes a good deal of additional information (e.g. additional taxa and additional locations) and is updated with regard to recent taxonomic literature. While it serves its own specified purpose, it will also hopefully contribute to a better understanding of the flora of Prince Edward Island generally.

C. Criteria

A taxon is included if there is evidence in the form of either a verified specimen or an acceptable literature report (e.g. a specimen-based report in an authoritative monograph or in Erskine's list) for its presence at three or fewer locations on the island and if there are fewer than four additional sight records. Sight records include both literature reports and personal communications. We have tried to find and check specimens; an herbarium acronym in the references indicates the location of material that we have checked.

Erskine's "master set" of collections is at DAO (where he produced the flora under the direction of W. G. Dore), with duplicates distributed to ACAD, and smaller incomplete sets to CAN, BM, GH, MT, NY, and US. In some cases specimens sent elsewhere are not duplicated in DAO. Thus when Erskine indicated a specimen-based record on his map, and we were unable to find it at DAO, there is a reasonable possibility that it exists in another collection. Since Erskine's work is generally reliable, his specimen-based reports should not be rejected without a good reason, such as a concerted unsuccessful attempt to find the justifying specimen. We have checked CAN and DAO for specimens of all species listed, and the precise basis for inclusion in the list will be clear from the references field. In some cases we have searched many herbaria for justifying specimens. Readers should refer to Appendix 1 for an explanation for the exclusion of various taxa from the final list.

Given the current level of information, the criteria described above seem appropriate, but as more information becomes available, other criteria corresponding to the definition of rarity (see above) may be applied.

D. Format of the list

The plant taxa, including species, subspecies and varieties, are listed alphabetically by their scientific names. Only native vascular plants of Prince Edward Island are included. A list of hybrids that are rare in the province is included in Appendix II. Forms are not dealt with. Each taxon listed may have six

data fields:

Field 1. Scientific Name and Synonymy

In most cases the scientific names used are either generally accepted or are the ones proposed in recent studies. In the latter case, the author and year are cited. Synonyms are listed only in cases where more than one scientific name has been recently applied to a taxon in relevant literature. Common names have not been listed because they are inprecise due to the current lack of standardization.

Field 2. Reference

This field includes the acronyms of herbaria containing specimens that we have seen and checked. If we have not seen and checked a specimen, no acronym is listed. In a case where there are three specimen-supported locations, a listed acronym means only that one or more specimens have been seen and checked; it does not mean that vouchers for all three locations have been checked. The following acronyms have been used: ACAD = Acadia University; CAN = National Museum of Canada; DAO = Agriculture Canada, Ottawa; MT = Herbier Marie-Victorin, Université de Montreal; UPEI = University of Prince Edward Island; GH = Harvard University; US = Smithsonian Institution; NY = New York Botanical Garden; UNB = University of New Brunswick. More information on these herbaria is available from Index Herbariorum (Holmgren & Keuken 1974).

Where a relevant and recent monographic study is available, which refers to presence in Prince Edward Island or provides important distributional data or taxonomic information, we have cited it here. References to literature are occasionally used in other fields to document statements.

Field 3. Range in North America

The primary sources for this field are Boivin (1966-67), Scoggan (1978-79), Fernald (1950) and recent monographs (when cited). Range is expressed as a northern limit (usually across Canada) from west to east, followed by the southern limits again from west to east. In most cases only standard abbreviations for provinces, territories or states are used to indicate range, but reference is occasionally made to regions such as "New England". A hyphen indicates continuous distribution, whereas a comma indicates discontinuous distribution.

Field 4. Range in Prince Edward Island

Place names, which correspond to locations shown on the map are listed here wherever possible. In some cases no nearby place name was available, so that the number of places listed is sometimes less than the number of map symbols.

Field 5. Habitat

The habitat field is based on either habitat notes on the label of a PEI specimen, or as suggested by our own field experience, or in the absence of the preceding sources, as indicated in the literature.

Field 6. Status

In the status field we note rarity in the surrounding region, i.e. Nova Scotia (Maher *et al.* 1978), New Brunswick (Hinds 1983),

the island of Newfoundland (Bouchard *et al.* 1991) and Quebec (Bouchard *et al.* 1983). We also note several cases in which the plant listed is considered rare in all of Canada (Argus and Pryer 1990). This information on regional status will help to assign priorities for protection.

Field 7. Notes

Comments are provided here on classification, recent studies, misidentifications, and on any other matters requiring explanation.

Maps

Dots indicate an occurrence based on a specimen seen by us or an acceptable literature report based on a specimen that we have not seen. Circles indicate reports for which no justifying specimen is currently known, and they represent either sight records or literature reports that are not based on specimens.

Appendices

Three appendices follow the main text. The first of these includes a listing of candidate species which we considered, but left out of the final list for the reason specified. The second appendix includes a list of hybrids that are rare in Prince Edward Island. While hybrids are not a high priority for protection because they can be created as long as the parent species survive, they are nevertheless of interest. In some cases the distinction between a hybrid and a species that evolved as a hybrid is a difficult one. The third appendix is a listing of the rare plants of Prince Edward Island in the taxonomic sequence of Fernald (1950).

E. Distribution Patterns of Rare Plants in Prince Edward Island

The size of an area may have something to do with whether or not particular plants occur there. Larger areas are larger targets for dispersing seeds and other reproductive parts, and are likely to have a greater diversity of habitats than smaller areas. It appears that a number of plants on this rare list are abundant or widespread in New Brunswick, but rare in Prince Edward Island only because of factors relating to either the extent of a particular habitat or to the rate of dispersal.

The rare plants of Prince Edward Island do not seem to be as concentrated in particular regions of the province as is sometimes the case in other Canadian provinces. Concentrations of rare species, however, do exist.

A scarcity of nutrient-poor lakes may explain the rarity of several plants characteristic of that particular habitat. Lake Verde, O'Keefe's Lake and Mermaid Lake contain an impressive number of provincially rare plants, including *Elatine minima, Eriocaulon septangulare, Isoetes macrospora, Juncus militaris, Lobelia dortmanna,* and *Sagittaria graminea.*

The Hillsborough River estuary has a number of provincially rare plants of saline shores including *Bidens connata, Bidens heterodoxa,* and *Distichlis spicata.*

The general region of North Point contains a variety of habitats ranging from sea-cliffs, to acid swamps, bogs and open wind-swept meadows. The provincially rare species here include *Andromeda glaucophylla, Botrychium simplex, Draba incana* var. *confusa, Carex folliculata, Parnassia parviflora, Rubus chamaemorus, Vaccinium uliginosum, Viola conspersa* and

Viola lanceolata. West Point is also rich in rare species including *Danthonia compressa* and *Spiranthes ochroleuca*.

Finally the strands, dunes and interdunal meadows on the sandy islands extending from Alberton to Grand Tracadie on the north shore are home to the endemic *Aster laurentianus* and *Lechea maritima* var. *subcylindrica* as well many provincially rare plants including *Arctostaphylos uva-ursi* var. *coactilis*, *Carex rugosperma*, *Empetrum eamesii* ssp. *eamesii*, *Hudsonia ericoides*, *Hudsonia tomentosa*, *Polygala sanguinea*, *Polygonum oxyspermum* ssp. *raii*, *Rumex maritimus* var. *fueginus* and var. *persicarioides*, and *Suaeda calceoliformis*.

F. Rare Canadian Plants in Prince Edward Island

There are some species in Prince Edward Island that are rare throughout their Canadian range, as well as being rare on the island. These include *Aster laurentianus*, *Bidens heterodoxa*, *Lechea maritima var. subcylindrica*, *Myriophyllum quitense*, *Spiranthes ochroleuca*, and *Triglochin gaspense*. The three former species are endemic to a portion of the Gulf of St. Lawrence region. *Spiranthes ochroleuca* is peripheral and becomes abundant furthur south in the Appalachian Mts. *Myriophyllum quitense* is widely distributed in North America but sparse. *Triglochin gaspense* is largely confined to the Gulf region.

The Canadian status of some other species on Prince Edward Island is not altogether clear. *Atriplex littoralis*, for example is believed to be introduced (Basset *et al.* 1983), but if subsequent study suggested that it was a native amphi-Atlantic disjunct, it would have to be considered rare in Canada since it is restricted in Canada to Prince Edward Island and the coast of Northumberland Strait.

G. Regionally Rare Plants on Prince Edward Island

Plants that are rare on the island as well as in one of the adjacent provinces are listed in Table 1 which is a summary of entries in the "status" field. This list includes 75 taxa. Approximately equal numbers of rarities are shared with each adjacent province, 26 with New Brunswick, 26 with Nova Scotia, 29 with Newfoundland and 20 with Quebec.

H. Protection of Rare Plants in Prince Edward Island

Under the discussion of distribution a number of sites are mentioned which harbour concentrations of provincially rare plants. These sites should be protected and an attempt should be made to find others like them. Currently rare native flora is protected in a National Park, in Provincial Parks and in protected Natural Areas, the latter designated under the Natural Areas Protection Act (Prov. Statutes, Chap. 46, 1988). However, there is an opportunity for a more systematic approach to protection now that a rare plant list is available. There is also an urgent need for field study to further document rare flora on the island. Additional information on rare flora of Prince Edward Island should be sent to the Island Nature Trust, P. O. Box 265, Charlottetown, Prince Edward Island, C1A 7K4.

I. Synopsis

The vascular flora of Prince Edward

Island includes approximately 700 native taxa (Erskine 1960, Catling et al. 1985, Catling unpub.) of which 191 (27.3 %) are here listed as rare. This number is similar to that of NS and NB but much smaller than that of Nfld and Que. It is however, an unusually high percentage. The greatest number of rarities occur in the grass family (Poaceae), the sedge family (Cyperaceae) and the Aster family (Asteraceae).

J. Acknowledgements

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It is also to be noted that Dr. Bill (W. G.) Dore assisted David Erskine with the production of the first authoritative list, and without his help and without the fine work of Erskine himself, a reasonable listing of the rare plants would not have been possible at this time.

Table 1. Rare vascular plants of Prince Edward Island that are rare in Canada, or in adjacent regions. CAN = Canada, NS = Nova Scotia, NB = NEW Brunswick, Nfld = Newfoundland, Que = Quebec.

Family/Species	CAN	NS	NB	Nfld	Que
OPHIOGLOSSACEAE					
Botrichyium dissectum		X			
Botrychium simplex		X		X	
Ophioglossum vulgatum var. ***pseudopodum***			X		X
BLECHNACEAE					
Woodwardia virginica			X		X
POTAMOGETONACEAE					
Potamogeton filiformis var. ***borealis***		X			
Potamogeton filiformis var. ***macounii***		X			
Potamogeton foliosus var. ***foliosus***				X	
Potamogeton pectinatus				X	
HYDROCHARITACEAE					
Elodea nuttallii			X		X
POACEAE					
Agrostis perennans				X	
Calamogrostis stricta ssp. ***inexpansa***		X			
Distichlis spicata			X		
Elymus virginicus				X	
Oryzopsis canadensis		X		X	
Puccinellia ambigua			X	X	
CYPERACEAE					
Carex annectens					X
Carex argyantha					X
Carex chordorrhiza				X	
Carex cumulata					X
Carex folliculata					X
Carex lacustris				X	

Family/Species	CAN	NS	NB	Nfld	Que
Eleocharis nitida		X		X	
Eleocharis ovata				X	
Eleocharis pauciflora			X	X	
Eriophorum gracile		X	X	X	
Scirpus rufus var. ***neogaeus***		X			
JUNCAGINACEAE					
Triglochin gaspense	X		X		
LEMNACEAE					
Spirodela polyrhiza			X		
ORCHIDACEAE					
Arethusa bulbosa					X
Goodyera repens var. ***ophioides***		X			
Platanthera blephariglottis var. ***blephariglottis***					X
Spiranthes ochroleuca	X		X		
BETULACEAE					
Betula pumila var. ***pumila***		X			
SANTALACEAE					
Commandra umbellata		X			
POLYGONACEAE					
Polygonum arifolium var. ***pubescens***			X		
Polygonum oxyspermum ssp. ***raii***			X	X	
Rumex maritimus var. ***persicarioides***		X	X		
AMARANTHACEAE					
Suaeda calceoliformis				X	
PORTULACACEAE					
Claytonia caroliniana				X	
Montia fontana			X		
RANUNCULACEAE					
Anemone canadensis		X		X	
Ranunculus pensylvanicus				X	
Ranunculus recurvatus				X	

Family/Species	CAN	NS	NB	Nfld	QUE
BRASSICACEAE					
Draba incana var. *confusa*			X		
CRASSULACEAE					
Crassula aquatica		X		X	X
SAXIFRAGACEAE					
Parnassia parviflora		X			
ROSACEAE					
Amelanchier fernaldii				X	
Crataegus chrysocarpa				X	
Geum laciniatum					X
POLYGALACEAE					
Polygala sanguinea		X	X		
EMPETRACEAE					
Corema conradii			X		X
Empetrum eamesii ssp. *eamesii*		X			
HYPERICACEAE					
Hypericum majus		X			
ELATINACEAE					
Elatine minima			X	X	
CISTACEAE					
Hudsonia ericoides				X	
Hudsonia tomentosa		X			X
Lechea maritima var. *subcylindrica*	X		X		
VIOLACEAE					
Viola fimbriatula			X		X
Viola lanceolata				X	
Viola nephrophylla		X			
Viola septentrionalis				X	

Family/Species	CAN	NS	NB	Nfld	Que
HALORAGIDACEAE					
Myriophyllum quitense	X				
Myriophyllum verticillatum				X	
PYROLACEAE					
Pyrola asarifolia subsp. ***asarifolia***		X			
Pyrola minor		X			
ERICACEAE					
Vacciniun uliginosum var. ***alpinum***		X	X		
Gaylussacia dumosa var. ***bigeloviana***					X
MONOTROPACEAE					
Pterospora andromedea			X		X
PRIMULACEAE					
Samolus valerandi ssp. ***parviflorus***		X	X		X
ASCLEPIADACEAE					
Asclepias incarnata		X			
LENTIBULARIACEAE					
Utricularia minor			X		
RUBIACEAE					
Mitchella repens				X	
ASTERACEAE					
Aster lanceolatus				X	
Aster laurentianus	X		X		X
Bidens heterodoxa	X				X
Gnaphalium obtusifolium var. ***obtusifolium***			X		
Lactuca hirsuta var. ***sanguinea***					X

ALPHABETICAL LIST OF RARE PLANTS WITH MAPS

Actaea pachypoda Ell.
REFERENCE: DAO, Erskine 1960.
RANGE: Man-NS; s Ga and Okla.
PEI: Hunter R., Hazel Gove, Richmond.
HABITAT: Rich woods and thickets.

Agropyron trachycaulum (Link) Malte
var. ***majus*** (Vasey) Fern.
REFERENCE: Erskine 1960.
RANGE: s BC-Lab; s to Oreg and
New England.
PEI: Indian River.
HABITAT: Dry, open places.

Agropyron trachycaulum (Link) Malte
var. ***novae-angliae*** (Scribn.) Fern.
REFERENCE: Erskine 1960.
RANGE: BC-Nfld; s to New England,
w to Nev.
PEI: Bloomfield, Dundee.
HABITAT: Dry, open places.

Agrostis perennans (Walt.) Tuckerm.
REFERENCE: DAO; Erskine 1960.
RANGE: Ont-Que; s to NC.
PEI: Ellerslie Brook, Lake Verde,
Selkirk (Armedale).
HABITAT: Periodically dry, open places.
STATUS: Rare in Nfld.

Alopecurus aequalis Sobol.
REFERENCE: DAO; Erskine 1960.
RANGE: Alaska and BC-Nfld;
s to N Mex and New England.
PEI: Wellington, Southport.
HABITAT: Shallow water, shores.

Amelanchier canadensis (L.) Med.
REFERENCE: DAO.
RANGE: Ont-NS, s to GA.
PEI: Bristol, Bothwell.
HABITAT: Blueberry barrens, fencerows.

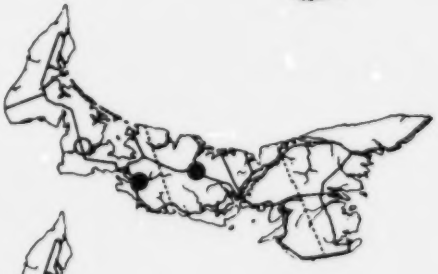
Amelanchier fernaldii Wieg.
REFERENCE: Erskine 1960.
RANGE: Gulf of St. Lawrence region.
PEI: Cavendish, Bothwell.
HABITAT: Damp to dry open barrens, thickets, ravines or shores.
STATUS: Rare in Nfld.

Andromeda glaucophylla Link
REFERENCE: DAO; Erskine 1960.
RANGE: Man-Nfld; s to Va.
PEI: Waterford, East Bideford.
HABITAT: Floating bog mats.

Anemone canadensis L.
REFERENCE: DAO; Erskine 1960.
RANGE: BC-NS; s to N Mex and New England.
PEI: between O'Leary and Coleman.
HABITAT: Thickets, meadows and shores.
STATUS: Rare in Nfld and NS.

Antennaria howellii Greene subsp. ***canadensis*** (Greene) Bayer (*Antennaria neodioica* subsp. *canadensis*)
REFERENCE: ACAD, CAN; Bayer & Stebbins 1982, Bayer 1989.
RANGE: Ont-Nfld; s to Va.
PEI: Heatherdale.
HABITAT: Dry fields, pastures, open woods and rocky barrens.

Aralia racemosa L.
REFERENCE: Erskine 1960.
RANGE: Man-NS; s to Ala.
PEI: Dunk River, Hunter River.
HABITAT: deciduous or mixed woods.



Arctostaphylos uva-ursi (L.) Spreng. var. ***coactilis*** Fern. & MacSwain
REFERENCE: DAO; Erskine 1960.
RANGE: Yukon-Nfld; s to Calif and Va.
PEI: West Point, Dalvay, Bothwell, Hog Island.
HABITAT: Dry, open dunes, sandy slopes.

Arethusa bulbosa L.
REFERENCE: DAO; Erskine 1960.
RANGE: Ont-Nfld; s to Okla and SC.
PEI: Black Banks, Waterford.
HABITAT: Sphagnous bogs, peaty meadows.
STATUS: Rare in Que.

Asclepias incarnata L.
REFERENCE: DAO; Erskine 1960.
RANGE: Man-NS; s to Tex.
PEI: Avondale.
HABITAT: Wet thickets.
STATUS: Rare in NS.

Aster borealis (T. & G.) Prov.
(*A. junciformis* Rydb.)
REFERENCE: DAO; Erskine 1960.
RANGE: Alaska-PEI; s to Colo, Ind and New England.
PEI: Mount Stewart, Dundee.
HABITAT: Wet, quaking marsh.

Aster lanceolatus Willd.
(*A. simplex* Willd.)
REFERENCE: CAN.
RANGE: Sask-Nfld; s to Kans and NC.
PEI: St. Charles, Forest Hill.
HABITAT: Alder swamp, damp clearings.
STATUS: Rare in Nfld.

Aster laurentianus Fern.
REFERENCE: CAN, DAO; Erskine 1960, also see Catling & McKay 1980 under *A. brachyactis*, Houle & Brouillet 1985. Houle 1988 (Ph D Thesis, Univ. de Montreal).
RANGE: PEI & Magdalen Is.
PEI: Tignish, Brackley Beach, Dalvay.
HABITAT: Open brackish sands or mud.
STATUS: Rare in Canada, NB and Que.
NOTES: The type (GH) was collected at Brackley Point.

Aster nemoralis Ait.
REFERENCE: DAO; Erskine 1960, Brouillet & Simon 1981.
RANGE: Ont-Nfld; s to Mich and New England.
PEI: Bloomfield, Peterville.
HABITAT: Sphagnous bogs, peaty shores.
NOTES: The hybrid *A.* x *blakei* was collected w of Tignish.

Aster radula Ait.
REFERENCE: DAO; Erskine 1960.
RANGE: Que-Nfld; s to Va.
PEI: Dingwells Mills.
HABITAT: Low woods, swamps and bogs.

Atriplex franktonii Taschereau
REFERENCE: DAO: Bassett *et al.* 1983.
RANGE: Que-NS and Nfld.
PEI: Cardigan, Victoria.
HABITAT: Sandy sea beaches.

Betula pumila L. var. *pumila*
REFERENCE: DAO; Erskine 1960.
RANGE: Lab-Nfld and NB-NS.
PEI: Miscouche Woods, St. Andrews, Dundee.
HABITAT: Swamps and bogs.
STATUS: Rare in NS.

Bidens cernua L. var. *elliptica* Wieg.
REFERENCE: Erskine 1960.
RANGE: Que; Wash to New England, s to Colo and NC
PEI: Southport
HABITAT: Swamps.
NOTES: Differing from the typical variety and var. *integra* principally in its more prominently narrowed leaves. This taxon deserves more taxonomic study.

Bidens cernua L. var. ***oligodonta*** Fern. & St John
REFERENCE: CAN; Erskine 1960.
RANGE: Magdaien Islands and PEI; s to Mass, also Minn.
PEI: Tracadie, North Lake (Rhodora 17: 24. 1915).
HABITAT: Brackish sand.
NOTES: Differing from the other varieties in being a matted fleshy halophyte with round-tipped leaves, but requiring more taxonomic study.

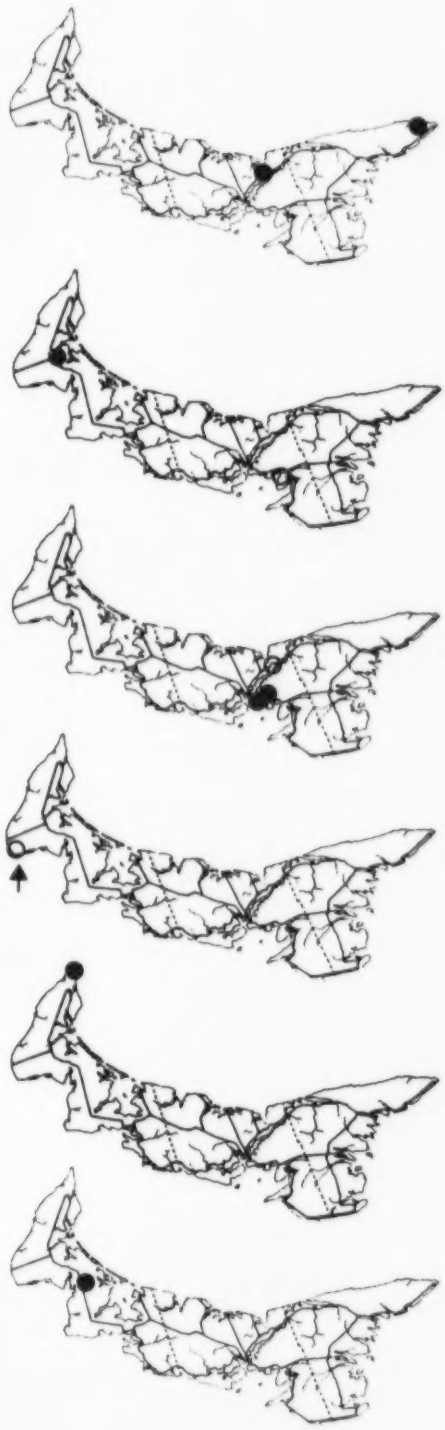
Bidens connata Muhl.
REFERENCE: DAO, GH.
RANGE: Ont-NS; s to Ohio and Del.
PEI: O'Leary, Cherry Valley.
HABITAT: Wet shores & swamps.

Bidens heterodoxa (Fern.) Fern. & St. John
REFERENCE: CAN; Erskine 1960.
RANGE: Magdalen Islands and PEI.
PEI: Bunbury.
HABITAT: Fresh, brackish or saline marshes.
STATUS: Rare in Canada and Que.

Botrychium dissectum Spreng.
REFERENCE: Roland & Smith 1969.
RANGE: Ont-NS; s to Miss and NC.
PEI: West Point.
HABITAT: Thickets, woods, meadows.
STATUS: Rare in NS.

Botrychium simplex E. Hitchc.
REFERENCE: DAO, UNB.
RANGE: BC-Nfld; s to N Mex and Va.
PEI: North Point.
HABITAT: Open windswept turf at clifftop.
STATUS: Rare in Nfld and NS.

Brachyelytrum erectum (Schreb.) Beauv. var. ***septentrionale*** Babel
REFERENCE: DAO; Erskine 1960.
RANGE: Ont-Nfld; s to La and Ga.
PEI: McNeill's Mills.
HABITAT: Dry stream banks.



Calamogrostis stricta (Timm) Koeler
subsp. ***inexpansa*** (Gray) C.W. Greene
var. ***inexpansa***
(*Calamagrostis inexpansa* Gray)
REFERENCE: DAO; Erskine 1960, Greene 1980.
RANGE: Alaska-Greenland, BC-NS; s to Calif and Maine.
PEI: Mt. Stewart, Brackley Beach, Summerside.
HABITAT: Border of ponds.
STATUS: Rare in NS.

Carex annectens Bickn.
REFERENCE: DAO; Erskine 1960.
RANGE: Ont-PEI; s to Va.
PEI: McNeills Mills.
HABITAT: Moist open places.
STATUS: Rare in Que.

Carex aquatilis Wahl. var. ***altior*** (Rydb.) Fern.
REFERENCE: Erskine 1960.
RANGE: BC-Nfld; s to Oreg, Miss and NJ.
PEI: Portage, Lake Verde.
HABITAT: Calcareous marshes.

Carex argyrantha Tuckerm.
REFERENCE: DAO; Erskine 1960.
RANGE: Ont-NS; s to NC.
PEI: Alliston, Indian River.
HABITAT: Dry woods, thickets and clearings.
STATUS: Rare in Que.

Carex chordorrhiza Ehrh.
REFERENCE: CAN, DAO, UNB.
RANGE: NWT-Nfld, Sask-NS; s to Indiana.
PEI: Portage, Blooming Point.
HABITAT: Bogs and bog pools.
STATUS: Rare in Nfld.

Carex cumulata (Bailey) Mackenzie
REFERENCE: DAO; Erskine 1960.
RANGE: Sask-NS; s to Ohio and Penn.
PEI: Bristol
HABITAT: Burned blueberry barren.
STATUS: Rare in Que.

Carex deflexa Hornem.
REFERENCE: DAO; Erskine 1960.
RANGE: Yukon and BC-Nfld:
s to Minn and NY.
PEI: Charlottetown, Brackley Point,
Glencorradale Corner.
HABITAT: Woods, clearings and turfy slopes.

Carex flava L.
REFERENCE: DAO; Erskine 1960, Crins & Ball 1989.
RANGE: Alaska and BC-Nfld;
s to Mont and NJ.
PEI: Portage, Cherry Valley, Bay Fortune.
HABITAT: Wet meadows, swales and shores.

Carex folliculata L.
REFERENCE: DAO; Erskine 1960.
RANGE: Ont-Nfld; s to NC.
PEI: North Point.
HABITAT: Acid, swampy woods.
STATUS: Rare in Que.

Carex gracillima Schwein.
REFERENCE: DAO; Erskine 1960.
RANGE: MdM-Nfld; s Miss and NC.
PEI: Tignish, e to Ellerslie,
Valleyfield, Mt. Albion.
HABITAT: Woodlands, thickets and meadows.
NOTES: Common (D. Griffin, pers. comm.).

Carex lacustris Willd.
REFERENCE: DAO; Erskine 1960.
RANGE: Man-NS; s to Ill and Va.
PEI: Alberton, O'Leary,
New Glasgow.
HABITAT: Swamps, marshes in shallow water.
STATUS: Rare in Nfld.

Carex limosa L.
REFERENCE: DAO; Erskine 1960.
RANGE: Alaska and BC-Nfld;
s to Calif and Ill.
PEI: Bloomfield, East Bideford, Stanhope.
HABITAT: Bogs, pond margins.

Carex mackenziei Krecz.
REFERENCE: UNB; Erskine 1960.
RANGE: Alaska-Nfld.
PEI: Rocky Point, Summerside, Blooming Point.
HABITAT: Saline or brackish marshes and flooded shores.

Carex pallescens L. var. *neogaea* Fern.
REFERENCE: DAO; Erskine 1960.
RANGE: Ont-Nfld; s to Ohio and Penn.
PEI: O'Leary, Charlottetown, Bear River, Georgetown.
HABITAT: Meadows, grasslands, thickets and glades.

Carex recta Boott
REFERENCE: CAN, MT, NY, US (J. Cayouette pers. comm.).
RANGE: n Ont-Nfld; s to Maine.
PEI: McWilliams Cove.
HABITAT: Saline, brackish shores.
NOTES: Other specimens mapped for PEI by Erskine (1960) have been revised.

Carex rugosperma Mackenzie
REFERENCE: DAO.
RANGE: Ont-NS; s to Minn and Va.
PEI: Brackley Beach, Brackley Point.
HABITAT: Wooded dunes, sandy roadsides.
NOTES: This and *C. tonsa* require more taxonomic study. *Carex tonsa* and *C. abdita* are rare in Nfld.

Carex stricta Lam.
REFERENCE: Standley 1989.
RANGE: Ont-NS; s to Tex and SC.
PEI: Prince Co. near Portage.
HABITAT: Marshes, swamps and shores.

Carex tincta Fern.
REFERENCE: Erskine 1960.
RANGE: Alta-NB; s to Wash and NY.
PEI: Hunter River.
HABITAT: Rich woods, thickets and fields.

Carex vesicaria L. var. *jejuna* Fern.
REFERENCE: DAO; Erskine 1960.
RANGE: Ont-Nfld; s to Wis and NY.
PEI: Tignish, Wellington.
HABITAT: Meadows, swales, shores.

Carex vulpinoidea Michx.
REFERENCE: Erskine 1960.
RANGE: BC-Nfld; and s.
PEI: Bunbury, Tignish, Wellington.
HABITAT: Open, wet meadows.

Carex wiegandii Mack.
REFERENCE: DAO; Reznicek & Ball 1980, Catling *et al.* 1985.
RANGE: Ont-Nfld; s to Penn.
PEI: Murray River.
HABITAT: Open bogs, boggy thickets.
NOTES: The basis of earlier reports of *C. atlantica*.

Ceratophyllum demersum L.
REFERENCE: CAN, DAO, GH, MT; Erskine 1969.
RANGE: Alaska and BC-NS; and s to Central Amer.
PEI: Tracadie, St. Charles, Pisquid Pond.
HABITAT: Quiet water.

Chenopodium macrocalycium Allen
REFERENCE: DAO; Bassett & Crompton 1982.
RANGE: PEI and NS s to FLa.
PEI: Borden, Wood Is.
HABITAT: Sand-gravel sea beaches, wastelands.

Circaea lutetiana L. ssp. *canadensis* (L.) Asch. & Mag.
REFERENCE: ACAD, DAO; Erskine *et al.* 1985, Boufford 1982.
RANGE: Ont-NS; s to Tenn and Ga.
PEI: Savage Harbour. Cavendish.
HABITAT: Rich hardwoods.

Claytonia caroliniana Michx.
REFERENCE: DAO; Erskine 1960.
RANGE: Sask-Nfld; s to Tenn and NC.
PEI: Hunter River, Campbell's Mills, Wheatley River, Morel River.
HABITAT: Mixed woods.
STATUS: Rare in Nfld.

Commandra umbellata (L.) Nutt.
(*C. richardsiana* Fern.)
REFERENCE: DAO; Erskine 1960.
RANGE: Man-Nfld; s to Kans and NY.
PEI: n shore from Cavendish to Bothwell.
HABITAT: Dry open places.
STATUS: Rare in NS.

Corema conradii Torr.
REFERENCE: DAO; Erskine 1960.
RANGE: Nfld-NS; s to NJ.
PEI: Bothwell, Murray River, Bristol Hog Island, Little Harbour/Black Pond.
HABITAT: Sandy pine-barrens, sandhills and siliceous rocks.
STATUS: Rare in NB and Que.

Crassula aquatica (L.) Schonl.
(*Tillaea aquatica* L.)
REFERENCE: DAO; Erskine 1960.
RANGE: Que-Nfld; s to Mex.
PEI: Mount Stewart, Grand Tracadie.
HABITAT: Margins of pools.
STATUS: Rare in Nfld, NS, and Que.
NOTES: This species is widespread in Canada, but generally rare (Cody 1954).

Crataegus chrysocarpa Ashe
REFERENCE: DAO; Erskine 1960.
RANGE: Que-Nfld; s to N Mex and NY.
PEI: Mt. Albion.
HABITAT: Thickets and rocky ground along streams.
STATUS: Rare in Nfld.

Crataegus holmesiana Ashe var. *villipes* Ashe
REFERENCE: DAO.
RANGE: se Canada and New England s to Minn.
PEI: Hunter River, Brackley Point, Charlottetown.
HABITAT: Open woods and thickets.

Cuscuta gronovii Willd.
REFERENCE: DAO; Erskine 1960.
RANGE: Man-NS; s to N Mex and Fla.
PEI: Plat River, Pleasant View.
HABITAT: Parasitic on many hosts in wet places.

Cypripedium calceolus L. var. *pubescens* (Willd.) Correll
REFERENCE: DAO, UNB.
RANGE: Yukon-Nfld; s to Oreg and Ga.
PEI: Miscouche, Mount Royal.
HABITAT: Open Tamarack swamp.

Danthonia compressa Austin
REFERENCE: Erskine 1960.
RANGE: Que-NS; s to Tenn and Va.
PEI: Elmira, East Point
HABITAT: Dry open woodlands and clearings.

Dentaria diphylla Michx.
REFERENCE: DAO; Catling *et al.* 1985.
RANGE: Ont-NS; s to Ky and SC.
PEI: Morell River below Indian Bridge.
HABITAT: Rich woods.
NOTES: First discovered on the island in 1983 and consequently not mapped on PEI by Montgomery (1955).

Deschampsia caespitosa (L.) Beauv.
var. *glauca* (Hartm.) Lindm.
REFERENCE: DAO; Erskine 1960.
RANGE: Yukon and BC-Nfld; s to Calif, Ariz and NJ.
PEI: Kensington.
HABITAT: Muddy, brackish river banks.

Dicentra cucullaria (L.) Bernh.
REFERENCE: DAO; Catling *et al.* 1985.
RANGE: Ont-NS; s to Kans and Ga.
PEI: Dunk river below Stanchel.
HABITAT: Rich hardwoods.

Distichlis spicata (L.) Greene
REFERENCE: DAO; Erskine 1960.
RANGE: PEI-NS; s to Tex and Fla, Pacific coast.
PEI: Charlottetown, North River Bridge.
HABITAT: Saline marshes.
STATUS: Rare in NB.

Draba incana L. var. *confusa* (Ehrh.) Lilj.
REFERENCE: DAO; Erskine 1960.
RANGE: Arctic, s to Que-Nfld, Magdalen Islands, and NB.
PEI: North Point.
HABITAT: Ledges and crests of sea cliffs.
STATUS: Rare in NB.

Drosera intermedia Hayne
REFERENCE: DAO; Erskine 1960.
RANGE: Ont-Nfld; s to Ohio and SC.
PEI: Mt. Stewart, Mermaid Lake, Red Point.
HABITAT: Mucky depressions in bogs.

Dulichium arundinaceum (L.) Britt.
REFERENCE: DAO; Erskine 1960.
RANGE: BC-Nfld; s to Calif and Fla.
PEI: Lake Verde, Watervale.
HABITAT: Swamps and margins of pools and streams.
NOTES: A specimen from Portage has been revised to *Carex chordorrhiza*.

Elatine minima (Nutt.) Frish & Mey.
REFERENCE: DAO; Erskine 1960.
RANGE: Ont-Nfld; s to Mich and Va.
PEI: Glenfinnan Lake, Lake Verde.
HABITAT: Sandy, peaty, or (rarely) muddy margins and shores of ponds, sometimes in shallow water.
STATUS: Rare in NB and Nfld.

Eleocharis nitida Fern.
REFERENCE: DAO
RANGE: Alaska-Nfld; s to New England.
PEI: Cavendish Narrows.
HABITAT: Damp peaty, or sandy shores.
STATUS: Rare in Nfld and NS.

Eleocharis obtusa (Willd.) Schult.
REFERENCE: DAO; Erskine 1960.
RANGE: BC, Ont-NS; s to Calif, Tex and Fla.
PEI: Tignish, Murray River.
HABITAT: Muddy or wet shores.

Eleocharis ovata (Roth) R. & S.
REFERENCE: DAO; Erskine 1960.
RANGE: Ont-NB; s to Minn, Ind and Conn.
PEI: Wellington.
HABITAT: Muddy bottom of former millpond.
STATUS: Rare in Nfld.

Eleocharis pauciflora (Light.) Link
REFERENCE: DAO; Erskine 1960.
RANGE: Yukon and BC-Nfld;
s to Calif and NJ.
PEI: Nail Pond.
HABITAT: Damp, sandy hollows behind dunes.
STATUS: Rare in Nfld and NB.

Elodea nuttallii (Planch.) St. John
REFERENCE: UNB; Catling & Wojtas 1986.
RANGE: BC, Man-Que, PEI-NS;
s to Colo, Ala, and NC.
PEI: Blooming Point.
HABITAT: Shallow water.
STATUS: Rare in NB and Que.
NOTES: Not mapped in PEI by Catling & Wojtas (1986), but recently collected at Blooming Point by H. Hinds (pers. comm.).

Elymus virginicus L.
REFERENCE: DAO; Erskine 1960.
RANGE: BC-Nfld; s to Wash, Ariz and Fla.
PEI: Selkirk.
HABITAT: Wet bottomland woods.
STATUS: Rare in Nfld.

Empetrum eamesii Fern. & Wieg. ssp. *eamesii*
(*E. rubrum* Vahl ssp. *eamesii*
(Fern. & Wieg.) R. Good, *E. nigrum* L.
var. *eamesii* (Fern. & Wieg.) Boivin)
REFERENCE: ACAD, DAO;
Catling *et al.* 1985.
RANGE: Que-Nfld, PEI-NS.
PEI: Stanhope.
HABITAT: Dry, open places.
STATUS: Rare in NS and evidently in Lab (Löve 1969). It is confined to the Gulf of St. Lawrence and Nfld-Lab region , and is apparently common only in Nfld.
NOTES: Classification requires more study.

Epifagus virginiana (L.) Barton
REFERENCE: DAO; Erskine 1960.
RANGE: Ont-NS; s to La and Fla.
PEI: w Prince Co., Charlottetown.
HABITAT: A parasite under beech trees.

Equisetum scirpoides Michx.
REFERENCE: Erskine 1960.
RANGE: Alaska and BC-Nfld;
s to Wash and NY.
PEI: Mt. Stewart.
HABITAT: Woodlands, on mossy knolls.

Erechtites hieracifolia (L.) Raf. var. *intermedia* Fern.
REFERENCE: DAO; Erskine 1960.
RANGE: Ont-PEI; s to Tex and Fla.
PEI: Tignish, Bunbury, Eldon, Wood Is.
HABITAT: Clearings, damp woods and burns.

Erigeron philadelphicus L.
REFERENCE: Erskine 1960.
RANGE: BC-Nfld; s to Tex and Fla.
PEI: Pleasant View, McNeill's Mills.
HABITATS: Shores and springy slopes.

Eriocaulon septangulare With.
REFERENCE: DAO; Erskine 1960.
RANGE: Ont-Nfld; s to Minn and Va.
PEI: Lake Verde, O'Keefe's Lake.
HABITAT: Shallow pools or streams.

Eriophorum gracile Roth
REFERENCE: DAO; Erskine 1960.
RANGE: Alaska and BC-Nfld;
s to Calif, Colo and Del.
PEI: Bristol.
HABITAT: Quaking marsh.
STATUS: Rare in NB, NS and Nfld.

Eriophorum viridi-carinatum (Engelm.) Fern.
REFERENCE: DAO; Erskine 1960.
RANGE: Alaska and BC-Nfld; s toIll.
PEI: Grand Tracadie, Bristol.
HABITAT: Peatlands, wet meadows
and swampy woods.

Fraxinus pennsylvanica Marsh
var. ***subintegerrima*** (Vahl) Fern.
REFERENCE: Erskine 1960.
RANGE: Que-NS; s to Tex and Fla.
PEI: w Prince Co.
HABITAT: Rich upland or lowland woods.

Gaylussacia dumosa (Andr.) T. & G.
var. ***bigeloviana*** Fern.
REFERENCE: DAO; Erskine 1960, Gauthier 1983.
RANGE: Que-Nfld and NB; s to Va.
PEI: Black Banks, Village Green,
Murray River, Miscouche Bog.
HABITAT: Peat bogs.
STATUS: Rare in Que.

Geranium robertianum L.
REFERENCE: CAN, DAO, UPEI;
Erskine 1960.
RANGE: Man-Nfld; s to Ill and W Va.
PEI: Campbellton, Indian Bridge,
Bear River station, Hermanville.
HABITAT: Rocky woods.

Geum canadense Jacq.
REFERENCE: ACAD.
RANGE: Ont-NS; s to Tex an Ga.
PEI: Savage Harbour
HABITAT: Dry or moist woodlands.

Geum laciniatum Murr.
REFERENCE: DAO; Erskine 1960.
RANGE: Ont-NS; s to Kans and NC.
PEI: Winter River, Brackley Station, Pisquid Pond.
HABITAT: Alder thickets.
STATUS: Rare in Que.

Geum macrophyllum Willd.
REFERENCE: DAO; Erskine 1960.
RANGE: Alaska and BC-Nfld; s to Calif, Minn and New England.
PEI: w Prince Co., Hunter River valley, ne Kings Co.
HABITAT: Rich woods, damp openings.

Glyceria canadensis (Michx.) Trin.
REFERENCE: DAO; Erskine 1960.
RANGE: Sask-Nfld; s to Ill and NC.
PEI: Portage, Bristol.
HABITAT: Damp places, shallow water.

Glyceria borealis (Nash) Batchelder
REFERENCE: DAO; Erskine 1960.
RANGE: Ala and BC-Nfld; s to Calif, Ill and Penn.
PEI: Tignish, Sea View, Upton, St. Peters Lake, Selkirk.
HABITAT: Wet, open places, shallow water.

Gnaphalium viscosum H.B.K.
(*G. macounii* Greene)
REFERENCE: DAO; Erskine 1960.
RANGE: BC-NS; s to Mex and Penn.
PEI: Pisquid Pond, Commercial Cross.
HABITAT: Dry clearings, pastures, woodland edges.

Gnaphalium obtusifolium L. var. ***obtusifolium***
REFERENCE: DAO; Erskine 1960.
RANGE: Ont-NS; s to Tex and Fla.
PEI: Brackley Beach, Commercial Cross.
HABITAT: Clearings, old fields, dunes.
STATUS: Rare in NB.

Goodyera repens (L.) R. Br. var. ***ophioides*** Fern.
REFERENCE: Erskine 1960, Kallunki 1976.
RANGE: Ala and BC-Nfld;
s to Mich and NC.
PEI: Brackley Point, Wood Islands West.
HABITAT: Hummocks in damp mossy woods.
STATUS: Rare in NS.

Habenaria blephariglottis
see ***Platanthera blephariglottis***

Hamamelis virginiana L.
REFERENCE: DAO.
RANGE: Ont-NS; s to Mo, Tenn and Ga.
PEI: Murray River.
HABITAT: Dry woods, in warm sites.
STATUS: Possibly rare in Que.

Hieracium canadense Michx.
REFERENCE: DAO, UNB; Erskine 1960.
RANGE: BC-Nfld; s to
Oreg, Iowa and NH.
PEI: Summerside, New Glasgow,
Southport, Greenwich Dunes.
HABITAT: Thickets, woodland edges, clearings.
NOTES: The var. *hirtirameum* Fern. is
reported from Summerside.

Hudsonia ericoides L.
REFERENCE: CAN, DAO; Erskine 1960.
RANGE: Nfld-NS; s to Del.
PEI: Bothwell, Brackley Beach.
HABITAT: Sand dunes and acid rocks.
STATUS: Rare in Nfld.
NOTES: The forma *leucantha* (white-flowered)
is also known from Bothwell.

Hudsonia tomentosa Nutt.
REFERENCE: DAO; Erskine 1960.
RANGE: Alta-NB; s to Ill and and NC.
PEI: Malpeque Beach, Brackley Beach,
Bothwell, Greenwich.
HABITAT: Sand dunes.
STATUS: Rare in NS and Que.

Hypericum majus (Gray) Britton
REFERENCE: DAO; Erskine 1960, Gillet & Robson 1981.
RANGE: BC-NB; s to Colo and NJ.
PEI: McNeills Mills, Dalvay.
HABITAT: Periodically wet, open soil.
STATUS: Rare in NS.

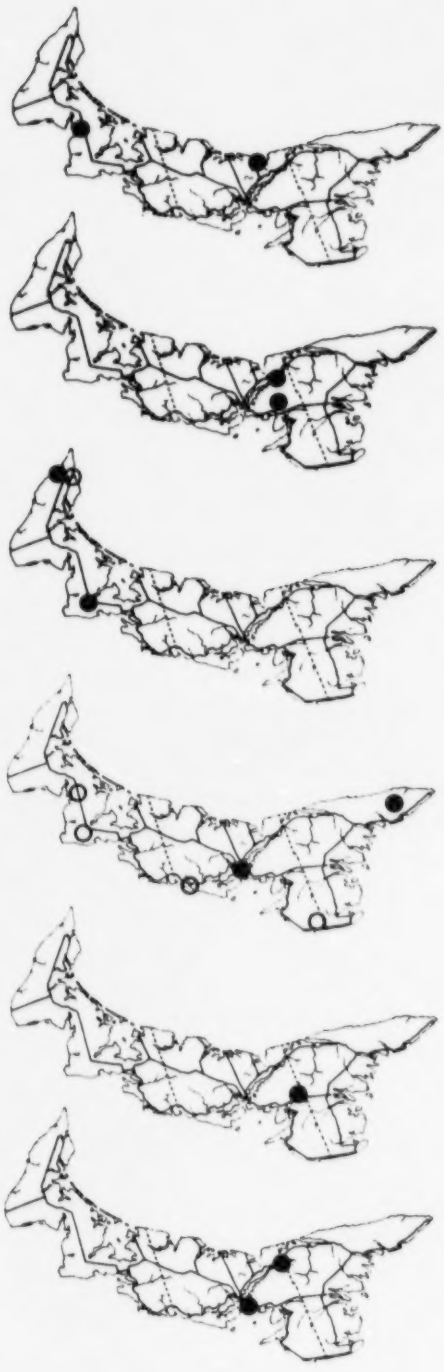
Isoetes macrospora Dur.
REFERENCE: ACAD, DAO, NSPM.
RANGE: Ont-Nfld; s to Minn and Va.
PEI: Lake Verde, Glenfinnan Lake.
HABITAT: Shallow water of fresh pools, lakes and streams.

Juncus dudleyi Wieg.
REFERENCE: DAO; Erskine 1960.
RANGE: BC-Nfld; s to Ariz, Tenn and Va.
PEI: Skinners Pond, Wellington.
HABITAT: Moist, open places.

Juncus filiformis L.
REFERENCE: CAN, DAO; Erskine 1960.
RANGE: Ala and BC-Nfld; s to Oreg, Mich and Penn.
PEI: Mt. Pleasant, Wellington, Charlottetown, Connaught Station, Wood Islands.
HABITAT: Wet shores and bogs.

Juncus militaris Bigel.
REFERENCE: DAO, Roland & Smith 1969.
RANGE: Ont-Nfld; s to Mich and Del.
PEI: Keefe's Lake.
HABITAT: Shallow water and shores.

Lactuca hirsuta Muhl. var. *sanguinea* (Bigel.) Fern.
REFERENCE: Erskine 1960.
RANGE: Ont-NS; s to Tex and Va.
PEI: Southport, Mount Stewart.
HABITAT: Dry open woods and clearings.
STATUS: Rare in Que.



Laportea canadensis (L.) Gaud.
REFERENCE: DAO; Catling *et al.* 1985, Bassett *et al.* 1974.
RANGE: Man-NS; s to Mont and Fla.
PEI: Dunk River.
HABITAT: Moist thickets and swampy woods.
NOTES: Erskine's report from Dunk River is probably reliable, although the specimen was lost. Known from St. Pierre-Miquelon but not Nfld.

Lechea maritima Leggett var. ***subcylindrica*** Hodgdon
REFERENCE: DAO, UNB; Hogdon 1938, Catling *et al.* 1985.
RANGE: PEI and e NB.
PEI: Hog Island.
HABITAT: sand dunes.
STATUS: Rare in Canada and NB.

Lemna trisculca L.
REFERENCE: DAO; Erskine 1960.
RANGE: BC-NS; s to Mex and Ala.
PEI: Souris, Dingwell's Mills.
HABITAT: Ponds, quiet streams and rivers.

Listera cordata (L.) R. Br.
REFERENCE: CAN, DAO; Erskine 1960.
RANGE: Alaska and BC-Nfld; s to Oreg, N Mex, and NJ.
PEI: Harmony.
HABITAT: Mossy knolls in boggy conifer woods.

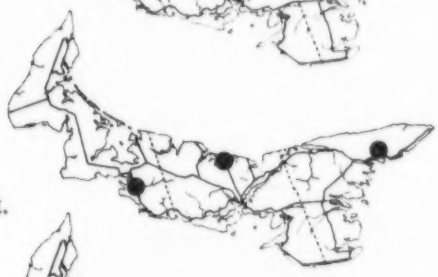
Lobelia dortmanna L.
REFERENCE: DAO; Erskine 1960.
RANGE: BC-Nfld; s to Oreg, Wis and NJ.
PEI: O'Keefe's Lake, Glenfinnan Lake, Lake Verde.
HABITAT: Shallow fresh water.

Maianthemum stellatum (L.) Link (*Smilacina stellata* (L.) Desf.)
REFERENCE: DAO; Erskine 1960, LaFrankie 1986.
RANGE: Alaska and BC-Nfld; s to Calif and Va.
PEI: Cavendish, West Point, Bothwell.
HABITAT: Old dunes, dry open meadows.

Mimulus ringens L.
REFERENCE: DAO; Erskine 1960.
RANGE: Sask-NB; s to Colo, Tex and Ga.
PEI: Winter River, Brackley Beach, Wellington.
HABITAT: Shores and wet meadows.

Mitchella repens L.
REFERENCE: DAO· Erskine 1960.
RANGE: Ont-Nfld; s to Tex and Fla.
PEI: Portage.
HABITAT: Woodlands.
STATUS: Rare in Nfld.

Monotropa hypopithys L.
REFERENCE: Erskine 1960
RANGE: BC-Nfld; s to Calif, Mex and Fla.
PEI: Bedeque, Brackley Point, Kilkenny Road, Harmony.
HABITAT: Sands and needle litter in pine forest.



Montia fontana L.
REFERENCE: Erskine 1960.
RANGE: Alaska and BC-Nfld; s to Calif and Maine.
PEI: Green's Shore at Summerside.
HABITAT: Pools and ditches.
STATUS: Rare in NB.

Muhlenbergia glomerata (Willd.) Trin.
var. *cinnoides* (Link) F. J. Hermann.
REFERENCE: DAO; Erskine 1960.
RANGE: Alta-Nfld; s to Nev, Mich and NY.
PEI: Indian River, Hillsborough River.
HABITAT: Bogs, fens.

Myriophyllum quitense H.B.K.
REFERENCE: DAO; Ceska *et al.* 1986.
RANGE: BC, PEI; Wash-Mex (Couch & Nelson 1988).
PEI: Winter River, ne of Charlottetown.
HABITAT: Lakes and rivers.
STATUS: Rare in Canada; not known in the surrounding region.

Myriophyllum verticillatum L.
REFERENCE: Erskine 1960.
RANGE: Alaska and BC-Nfld; s to Calif, Tex and Md.
PEI: Tignish.
HABITAT: Ponds and lakes.
NOTES: The PEI plant was referred to var. *intermedium* Koch, which seems to require more study.
STATUS: Rare in Nfld.

Oenothera parviflora L.
REFERENCE: Erskine 1960.
RANGE: BC-Nfld; s to Mont, ILL, and NJ.
PEI: Charlottetown, Brackley Beach, Fortune Bridge.
HABITAT: Dry, open places, wastelands.
NOTES: We have assumed that Erskine's (1960) reports of *O. cruciata* are based on the var. *stenopetala* (Bickn.) Fernald, a synonym of *O. parviflora*.

Ophioglossum vulgatum
var. ***pseudopodum*** (Blake) Farwell
REFERENCE: DAO; Erskine 1960.
RANGE: BC, Ont-NS; s to Mex and Fla.
PEI: Brackley Point, Dalvay House.
HABITAT: Grassy swales, damp sands.
STATUS: Rare in NB and Que.

Orobanche uniflora L.
REFERENCE: Erskine 1960.
RANGE: Que-NB; s to Tex and Fla.
PEI: Langley Beach near Southport.
HABITAT: Woodlands.

Oryzopsis asperifolia Michx.
REFERENCE: UPEI.
RANGE: BC-Nfld; s to Va.
PEI: Greenwich.
HABITAT: Open, sandy woods.

Oryzopsis canadensis (Poir.) Torr.
REFERENCE: Erskine 1960, Raymond 1953.
RANGE: Alta-Nfld;
s to Mich, W Va and NY.
PEI: Bristol.
HABITAT: Sandy barrens, dry open woods.
STATUS: Rare in Nfld and NS.

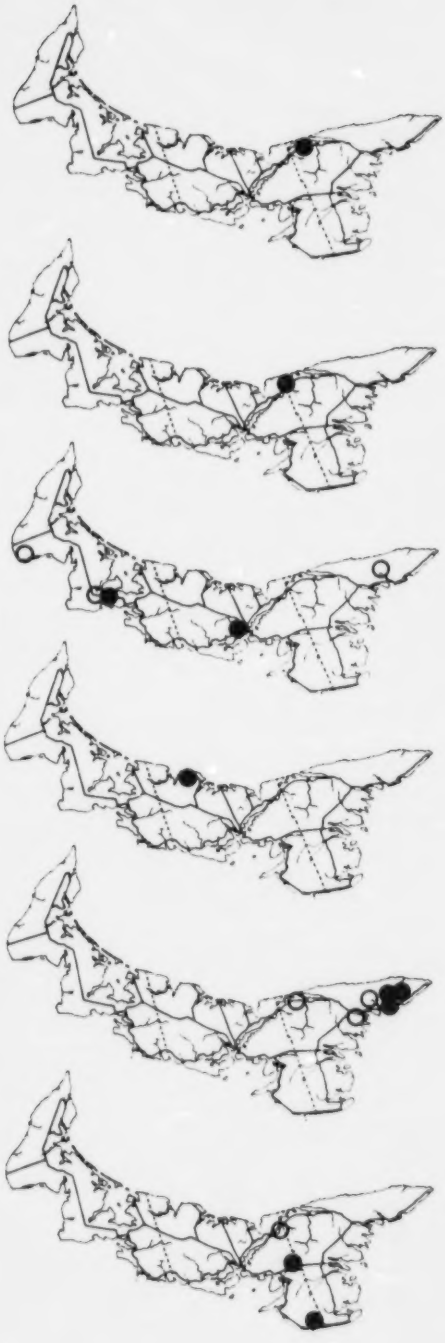
Osmorhiza longistylis (Torr.) DC.
REFERENCE: ACAD.
RANGE: Alta-NS; s to N Mex, Ky and Va.
PEI: Savage Harbour.
HABITAT: Rich, often alluvial hardwoods.

Osmunda regalis L. var. *spectabilis* (Willd.) Gray
REFERENCE: DAO; Erskine 1960.
RANGE: Sask-Nfld; s to Mex and Fla.
PEI: Wellington.
HABITAT: Swampy woods.

Ostrya virginiana (Mill.) K. Koch
REFERENCE: DAO; Catling *et al.* 1985.
RANGE: Man-NS; s to Okla and Va.
PEI: Cavendish.
HABITAT: Rich hardwoods.

Panax trifolius L.
REFERENCE: DAO; Erskine 1960.
RANGE: Ont-NS; s to Nebr and Ga.
PEI: ne uplands only, Mt. Stewart,
Fortune Bridge to Glencorradale.
HABITAT: Rich hardwoods.

Panicum depauperatum Muhl.
var. *involutum* (Torr.) Wood
REFERENCE: DAO; Erskine 1960.
RANGE: Man-NS; s to Tenn and NC.
PEI: Pisquid West, Morell, Wood Is.
HABITAT: Dry open places.



Parnassia parviflora DC.
REFERENCE: DAO; Erskine 1960.
RANGE: Alaska and BC-Nfld;
s to Colo.
PEI: Nail Pond. Cape Wolf.
HABITAT: Wet calcareous seepage.
STATUS: Rare in NS.

Phragmites australis (Cav.) Trin. *ex* Steudel
(*P. communis* Trin.)
REFERENCE: DAO; Erskine 1960.
RANGE: BC-NS; s to Mex.
PEI: Dunk River estuary,
Cavendish Narrows, Lennox Is.
HABITAT: Fresh to alkaline marshes
ponds, and ditches.

Pilea pumila (L.) Gray
REFERENCE: DAO; Erskine 1960,
Bassett *et al.* 1974.
RANGE: Ont-PEI; s to Tex and Fla.
PEI: Dundee, Mt. Stewart, Tignish.
HABITAT: Moist shaded places.

Pinus banksiana Lamb.
REFERENCE: DAO; Erskine 1960.
RANGE: NWT and Alta-NS;
s to Ind and NY.
PEI: Tignish, East Bideford.
HABITAT: Rocky or sandy soil,
occasionally bogs.

Platanthera blephariglottis (Willd.) Torr.
var. ***blephariglottis***
(*Habenaria blephariglottis* (Willd.) Hooker)
REFERENCE: DAO, Erskine 1960.
RANGE: Ont-Nfld; s toIll and NJ.
PEI: Mount Stewart, Black Banks, Wood Islands.
HABITAT: Wet, open bogs.
STATUS: Rare in Que.

Polygala sanguinea L.
REFERENCE: Erskine 1960, Gillet 1968.
RANGE: Ont-NS; s to Tex and NC.
PEI: Cavendish.
HABITAT: Sandy, open ground.
STATUS: Rare in NB and NS.

Polygonum allocarpum Blake
REFERENCE: Erskine 1960.
RANGE: James Bay, Que-Nfld;
s to Maine.
PEI: Mt. Stewart, Bunbury.
HABITAT: Sandy, gravelly or rocky seacoasts.
NOTES: Included in *Polygonum fowleri* Robins. by some authors.

Polygonum arifolium L.
var. ***pubescens*** (Keller) Fern.
REFERENCE: DAO; Erskine 1960.
RANGE: Ont-PEI; s to Minn,
Ind and Penn.
PEI: Beach Grove, Lake Verde,
Watervale, Cherry Valley, Wood Is.
HABITAT: Moist thickets and swamps.
STATUS: Rare in NB.
NOTES: all PEI plants are of this species are referrable to var. *pubescens*, as in New Brunswick (Hinds 1986).

Polygonum punctatum Ell.
var. ***confertiflorum*** (Meisn.) Fassett
REFERENCE: DAO; Erskine 1960.
RANGE: BC-PEI; s to Mex and New England.
PEI: Mt. Stewart, Tracadie.
HABITAT: Wet places, shores, swamps, bogs.

Polygonum oxyspermum Mey. & Bunge
ssp. *raii* (Bab.) Webb & Chater (*P. raii* Bab.)
REFERENCE: Erskine 1960.
RANGE: Que-Nfld-NS.
PEI: Brackley Beach, Grand Tracadie, North Lake.
HABITAT: Sandy or gravelly sea beaches, strands or dune hollows.
STATUS: Rare in NB and Nfld.
NOTES: Largely resticted to the Gulf of St. Lawrence region in North America, but also in nw Europe.

Polygonum scandens L.
REFERENCE: DAO; Erskine 1960.
RANGE: Sask-Nfld; s to Tex and Fla.
PEI: Campbell's Mills near New Glasgow
HABITAT: Alluvial meadows and thickets.

Polypodium virginianum L.
REFERENCE: DAO; Erskine 1960.
RANGE: BC-Nfld; s to Ark, Tenn and Ga.
PEI: Dunk River above Central Bedeque.
HABITAT: Steep wooded slopes and sandstone ledges.

Pontederia cordata L.
REFERENCE: DAO; Erskine 1960.
RANGE: Ont-PEI; s to Okla and Fla.
PEI: Lake Verde, Southport.
HABITAT: Muddy shores or in shallow fresh water.

Potamogeton alpinus Balbis var.
tenuifolius (Raf.) Ogden
REFERENCE: DAO, UNB; Erskine 1960.
RANGE: Alaska and BC-Nfld; s to Calif, Colo and Penn.
PEI: Pleasant View, Watervale.
HABITAT: Shallow alkaline water.
NOTES: This variety may not be worthy of recognition, but regardless the species is represented in PEI only by material that has been referred to this variety. Thus the species is rare.

Potamogeton filiformis Pers.
var. ***borealis*** (Raf.) St. John
REFERENCE: UNB; Erskine 1960.
RANGE: Alaska and BC-Nfld;
s to Colo, Mich and Penn.
PEI: Brackley Beach, Bloomong Point.
HABITAT: Calcareous or brackish waters.
STATUS: Rare in NS.

Potamogeton filiformis Pers. var. ***macounii*** Morong
REFERENCE: Erskine 1960.
RANGE: Alta-PEI; s to Calif and Wis.
PEI: North Lake.
HABITAT: Calcareous or brackish waters.
STATUS: Rare in NS.

Potamogeton foliosus Raf. var. ***foliosus***
(*P. foliosus* Raf. var. *macellus* Fern.)
REFERENCE: CAN, K, NY, US; Erskine 1960, Haynes 1974.
RANGE: Yukon and BC-NS;
s to Mex and the Carribean.
PEI: Southport.
HABITAT: Alkaline waters.
STATUS: Rare in Nfld.

Potamogeton pectinatus L.
REFERENCE: DAO; Erskine 1960.
RANGE: Alaska and BC-Nfld;
s to Calif and Fla.
PEI: North Lake, Black Pond, Clark's Pond at Cavendish, Lower Sea Cow Pond.
HABITAT: Saline, or calcareous waters.
STATUS: Rare in Nfld.

Potamogeton vaginatus Turcz.
REFERENCE: Erskine 1960.
RANGE: Alaska and BC-Nfld;
s to Oreg, Minn and NJ.
PEI: Selkirk.
HABITAT: A clear brook.

Pterospora andromedea Nutt.

REFERENCE: Erskine 1960 refers to three reports. Mapped for PEI by Bakshi 1959.
RANGE: BC-PEI; s to Calif and Vt.
PEI: Prospect Creek.
HABITAT: Root parasite in pine woods.
STATUS: Rare in NB and Que.
NOTES: Despite the fact that no specimens are known, the reports of this distinctive plant are probably reliable.

Puccinellia ambigua Sorensen

REFERENCE: CAN.
RANGE: Ont-Nfld s to NB.
PEI: Alberton.
HABITAT: Brackish sands in salt marshes.
STATUS: Rare in NB and Nfld.

Puccinellia americana Sorensen

REFERENCE: DAO; Erskine 1960.
RANGE: Que-NS; s to Del.
PEI: Bunbury.
HABITAT: Coastal sands and saltmarshes.

Pyrola asarifolia Michx. ssp. *asarifolia*

REFERENCE: DAO; Erskine 1960.
RANGE: Alaska and BC-Nfld; s to Oreg, N Mex and New England.
PEI: Pleasant View, Skinner Pond, Dundee.
HABITAT: Calcareous woods and swamps.
STATUS: Rare in NS.
NOTES: Plants from Dundee represent the poorly defined var. *purpurea* (Bunge) Fern.

Pyrola chlorantha Sw.

REFERENCE: Erskine 1960.
RANGE: Alaska and BC-Nfld; s to Calif, Ariz and Pa.
PEI: w Prince Co., Alberton (includes report of forma *paucifolia* (Fern.) Camp)
HABITAT: Dry coniferous woods.

Pyrola minor L.
REFERENCE: Erskine 1960.
RANGE: Alaska and BC-Nfld;
s to Calif, N Mex and New England.
PEI: Hunter River, Harmony.
HABITAT: Conifer woods.
STATUS: Rare in NS.

Ranunculus pensylvanicus L. f.
REFERENCE: DAO; Erskine 1960.
RANGE: BC-Nfld; s to
Wash, Ariz and Del.
PEI: Tignish.
HABITAT: Mucky alder thickets.
STATUS: Rare in Nfld.

Ranunculus recurvatus Poir.
REFERENCE: Erskine 1960.
RANGE: Ont-Nfld; s to Tex and Fla.
PEI: Harmony.
HABITAT: Damp or swampy woods,
stream banks.
STATUS: Rare in Nfld.

Rosa nitida Willd.
REFERENCE: Erskine 1960.
RANGE: Ont-Nfld; s to n New England.
PEI: Mount Stewart region to Dundee,
De Sable, Murray River.
HABITAT: Bogs, thickets, pond margins,
in acid soil.

Rubus chamaemorus L.
REFERENCE: Erskine 1960.
RANGE: Alaska and BC-Nfld; s to NY.
PEI: Black Banks, Black Marsh,
East Bideford, Murray Harbour,
Miscouche Bog.
HABITAT: Moist, acid peat bogs.

Rubus elegantulus Blanchard
REFERENCE: Erskine 1960.
RANGE: Que-Nfld; s to NJ.
PEI: Mt. Stewart.
HABITAT: Thickets and clearings.

Rubus pensilvanicus Poir.
(*R. pergatus* Bailey)
REFERENCE: DAO; Erskine 1960.
RANGE: Ont-Nfld; s to Minn, Ark and Ala.
PEI: Huntley River, Murray River.
HABITAT: Clearings and woodland edges.

Rubus tardatus Blanchard
REFERENCE: Erskine 1960.
RANGE: Ont-NS; s to Mich and Del.
PEI: South Lake near Bothwell.
HABITAT: Meadows and clearings.

Rumex maritimus L. var. ***fueginus*** (Philippi) Dusén
REFERENCE: Erskine 1960.
RANGE: Alaska and BC-NS;
s to Calif, Ark and NY.
PEI: Brackley Beach, Bunbury.
HABITAT: Saline marshes and shores.

Rumex maritimus L.
var. ***persicarioides*** (L.) R. S. Mitchell
REFERENCE: UNB; Erskine 1960.
RANGE: Alaska and BC-NS;
s to Calif, Ark and NY.
PEI: Malpeque, Grand Tracadie,
Greenwich Dunes.
HABITAT: Sandy beaches and borders
of coastal marshes.
STATUS: Rare in NB and NS.

Rumex pallidus Bigel.
REFERENCE: Erskine 1960.
RANGE: Que-Nfld; s to NY.
PEI: Plat River (on Malpeque Bay).
HABITAT: Saline or brackish
marshes, beaches.

Sagina nodosa (L.) Fenzl subsp. ***borealis*** Crow
REFERENCE: CAN, DAO, GH, NY,
UNB, US; Erskine 1960, Crow 1978.
RANGE: NWT and BC-Nfld;
s to Minn and Maine.
PEI: North Shore to Greenwich Dunes
around to Bothwell
HABITAT: damp rocky, gravelly or peaty soil.

Sagittaria graminea Michx. var. *graminea*
REFERENCE: DAO; Erskine 1960, Bogin 1955, Wooten 1973.
RANGE: Ont-Nfld; s to Tex and Fla.
PEI: O'Keef's Lake.
HABITAT: Wet sand, shallow water.

Salix petiolaris Sm.
REFERENCE: CAN.
RANGE: BC-NS; s to Nebr and NJ.
PEI: Freetown.
HABITAT: Moist, open areas.

Samolus valerandi L.
ssp. *parviflorus* (Raf.) Hultén
(*Samolus parviflorus* Raf.)
REFERENCE: Erskine 1960.
RANGE: Alaska and BC-NS; s to CA, Mex and Fla.
PEI: Selkirk.
HABITAT: Edges of streams, ditches and pools.
STATUS: Rare in Que, NS and NB.

Sanicula marilandica L.
REFERENCE: ACAD, CAN, DAO, MT; Erskine 1960, Pryer & Phillipe 1989.
RANGE: BC-Nfld; s to Nfld and Fla.
PEI: Hunter River, Dundee, Tignish, Pleasant View.
HABITAT: Thickets, shores, meadows and open woods.

Schizachne purpurascens (Torr.) Swallen
REFERENCE: DAO; Erskine 1960.
RANGE: Alaska and BC-Nfld; s to n Mex and W Va.
PEI: Indian River, St. Charles (f. *albicans* Fern., without purple colouring).
HABITAT: Thickets and woods.
STATUS: The var. *pubescens* is rare in Que.

Scirpus rufus (Huds.) Schrad. var. ***neogaeus*** Fern.
REFERENCE: DAO; Erskine 1960.
RANGE: Alaska and BC-Nfld and NS.
PEI: Summerside, North Rustico,
Brackley Beach.
HABITAT: Brackish marshes.
STATUS: Rare in NS.

Senecio aureus L.
REFERENCE: DAO; Erskine 1960, Kowal 1975.
RANGE: Man-Nfld;
s to S Dak, Ark and Fla.
PEI: vicinity of Tignish
HABITAT: spruce-cedar swamp

Senecio schweinitzianus Nutt.
(*Senecio robbinsii* Oakes)
REFERENCE: DAO; Erskine 1960, Kowal 1975.
RANGE: Que-NB; s to Tenn and NC.
PEI: Summerside, Winsloe Rd., St Charles.
HABITAT: Meadows and swamps.

Smilacina stellata - see ***Maianthemum stellatum***

Solidago altissima L.
REFERENCE: UNB; Erskine 1960.
RANGE: Ont-NB; s to Tex and Fla.
PEI: Greenwich Dunes.
HABITAT: Meadows and fields.

Solidago flexicaulis L.
REFERENCE: CAN, DAO; Erskine 1960.
RANGE: Ont-NS; s to Kans and NC.
PEI: Glencorradale, Hermanville.
HABITAT: Rich sugar maple woods.

Solidago hispida Muhl.
REFERENCE: Erskine 1960.
RANGE: Sask-Nfld; s to Ark and Ga.
PEI: St. Peters.
HABITAT: Dry, open places.

Solidago juncea Ait.
REFERENCE: DAO; Erskine 1960.
RANGE: Sask-NS; s to Mo, Tenn and Ga.
PEI: Kilmuir.
HABITAT: Dry open places.

Solidago macrophylla Pursh
REFERENCE: Erskine 1960.
RANGE: Ont-Nfld; s to NY and Mass.
PEI: Tignish, Harmony.
HABITAT: Cool, damp woods and thickets.

Sphenopholis intermedia Rydb.
REFERENCE: DAO; Erskine 1960.
RANGE: Alaska and BC-Nfld;
s to Colo and Fla.
PEI: Dunk River.
HABITAT: Shaded floodshore of river.
STATUS: Rare in Nfld.

Spiranthes cernua (L.) L.M.C. Rich.
REFERENCE: DAO; Sheviak 1972.
RANGE: Ont-NS; s to Tex and Fla.
PEI: Heatherdale.
HABITAT: Moist open places.
NOTES: Reported as *S. lucida*
by Erskine (1960).

Spiranthes ochroleuca (Rydb. *ex* Britton) Rydb.
REFERENCE: TRT, Catling 1980,
Sheviak & Catling 1980,
Catling & Brown 1983.
RANGE: Ont-NS; s to NC.
PEI: East Point.
HABITAT: Dry, open sandy ground.
STATUS: Rare in Canada and NB.

Spirodela polyrhiza (L.) Schleid.
REFERENCE: DAO; Erskine 1960.
RANGE: BC, Ont-NS; s to Mex and Fla.
PEI: Grand Tracadie, Pisquid Pond,
Watervale pond.
HABITAT: Ponds.
STATUS: Rare in NB.

Stellaria humifusa Rottb. var. ***oblongifolia*** Fenzl
REFERENCE: DAO; Erskine 1960.
RANGE: Alaska and BC-Nfld, NB, NS; s to Oreg.
PEI: Souris, Rocky Point, Alberton.
HABITAT: Damp, brackish sand.

Suaeda calceoliformis (Hook.) Mpq.
(*Suaeda americana* (Pers.) Fern.)
REFERENCE: Erskine 1960, Bassett & Crompton 1978.
RANGE: Yukon-NS; s to Maine.
PEI: Cape Aylesbury.
HABITAT: Salt marshes and sea strands.
STATUS: Rare in Nfld.

Teucrium canadense L.
REFERENCE: DAO.
RANGE: Ont-NS; s to Tex and Fla.
PEI: Cavendish Narrows.
HABITAT: Upper salt marsh, shores, moist thickets.

Thalictrum venulosum Trel. var. ***confine*** Fern.
REFERENCE: DAO; Erskine 1960.
RANGE: Ont-NS; s to Minn and VT.
PEI: Campbellton.
HABITAT: Alluvial, calcareous shores.

Tillaea aquatica see ***Crassula aquatica***

Triglochin gaspense Lieth & D. Love
REFERENCE: Ford & Ball 1988.
RANGE: Que-Nfld, NB; s to Maine.
PEI: Souris.
HABITAT: Mudflats of salt marsh.
STATUS: Rare in Canada and NB.
NOTES: Previously thought to be a hybrid of *T. maritimum* and *T. palustre*. The justifying specimen for the report of Catling *et al.* (1985), *i.e. Erskine 1467*, appears to be *T. maritimum* L., but *T. gaspense* is nevertheless recently reported from Souris by Ford & Ball (1988).

Triglochin palustris L.
REFERENCE: DAO; Erskine 1960.
RANGE: Alaska and BC-Nfld;
s to Calif and Pa.
PEI: Grand Tracadie, Mount Stewart,
Cape Wolf.
HABITAT: Wet, open, brackish or
calcareous places.

Typha angustifolia L.
REFERENCE: DAO; Erskine 1960.
RANGE: Man-NS; s to Calif and SC.
PEI: Wood Islands, Village Green, Vernon,
Dunk River.
HABITAT: Brackish marshes, river margins.
NOTES: Becoming increasingly common in
roadside ditches in parts of its range.

Urtica procera Muhl.
REFERENCE: Erskine 1960.
RANGE: Sask-NS; s to La and NC.
PEI: Hunter River, Brackley Point, York.
HABITATS: Clearings, moist meadows.

Utricularia cornuta Michx.
REFERENCE: DAO; Erskine 1960.
RANGE: Man-Nfld; s to Tex and Fla.
PEI: East Bideford, Mermaid Lake.
HABITAT: Moist, sandy or peaty shores.

Utricularia minor L.
REFERENCE: CAN, DAO; Erskine 1960.
RANGE: Alaska and BC-Nfld;
s to Calif and NJ.
PEI: Watervale, Mount Stewart,
Murray Harbour.
HABITAT: Shallow calcareous pools.
STATUS: Rare in NB.

Vaccinium uliginosum L.
(incl. var. *alpinum* Bigel.)
REFERENCE: Erskine 1960, Vander Kloet 1988.
RANGE: (of the species) Alaska and BC-Nfld; s to Calif, Mich and Vt.
PEI: Waterford.
HABITAT: Exposed heathlands, cliffs.
STATUS: Rare in NS and NB.
NOTES: The PEI material was referred to var. *alpinum* Bigel., which is not recognized by Vander Kloet (1988).

Veronica scutellata L.
REFERENCE: Erskine 1960.
RANGE: Alaska and BC-Nfld; s to Calif, Ill and Va.
PEI: Prince Co. w of Summerside.
HABITAT: Wet shorelines and swamps.

Viburnum lantanoides Michx.
(*V. alnifolium* Marsh)
REFERENCE: Erskine 1960.
RANGE: Ont-NS; s to Tenn and Ga.
PEI: Surrey.
HABITAT: Acid woods.

Viola conspersa Reichenb.
REFERENCE: DAO, UNB
RANGE: Man-NS; s to Tenn and Ga.
PEI: North Point.
HABITAT: Damp woods and meadows.

Viola fimbriatula Sm.
REFERENCE: Erskine 1960.
RANGE: Ont-PEI; s to Okla and Fla.
PEI: Charlottetown, Rocky Point.
HABITAT: Dry, open woods and clearings.
STATUS: Rare in Que and NB.

Viola lanceolata L.
REFERENCE: DAO, UNB.
RANGE: Ont-Nfld; s to Tex and Fla.
PEI: North Point.
HABIATAT: Moist shores and thickets.
STATUS: Rare in Nfld.

Viola nephrophylla Greene
REFERENCE: Erskine 1960.
RANGE: NWT and BC-Nfld;
s to Calif and New England.
PEI: O'Leary, Milo.
HABITAT: Calcareous cedar swamps.
STATUS: Rare in NS.

Viola pubescens Ait.
REFERENCE: DAO; Erskine 1960.
RANGE: Man-NS; s to Okla and NC.
PEI: Hunter River, Alberton.
HABITAT: Moist deciduous woods.
STATUS: Rare in Que.
NOTES: Reported by Erskine (1960)
as *V. pensylvanica* Michx. var. *leiocarpa*
(Fern. & Wieg.) Fern.

Viola septentrionalis Greene
REFERENCE: DAO; Erskine 1960.
RANGE: BC-Nfld; s to Wash and Va.
PEI: Wellington Centre, Summerside,
Hunter River.
HABITAT: Open woods and clearings.
STATUS: Rare in Nfld.

Woodwardia virginica (L.) Sm.
REFERENCE: DAO; Erskine 1960, Cody 1963.
RANGE: Ont-NS; s to Tex and Fla.
PEI: Murray River, Village Green, Mermaid Lake,
Southport.
HABITAT: Acid bogs and swamps.
STATUS: Rare in NB and Que.

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APPENDIX I.
List of excluded taxa.

Amelanchier stolonifera Wiegand - Revised to *A. canadensis* (L.) Med.
Aronia melanocarpa (Michx.) Ell. - Widespread.
Artemesia biennis Willd. - Introduced.
Aster macrophyllus L. - Widespread.
Aster novi-belgii L. var. *littoreus* Gray = *A. novi-belgii* L.
Atriplex laciniata L. - Believed to be introduced (Bassett *et al.* 1983).
Atriplex sabulosa Rouy = *A. laciniata* L.
Atriplex subspicata (Nutt.) Rydb. - Widespread, see Bassett *et al.* 1983 and Thannheiser (1981, 1984).
Bidens cernua L. var. *integra* Wieg. - Erskine (1960) apparently never saw a specimen, although Fernald's (1950) report may be based on a specimen at GH. Nevertheless the variety is not well differentiated and requires more study.
Carex angustior Mack. - Revised to *C. interior* Bailey.
Carex atlantica Bailey ssp. *atlantica* - Revised to *C. wiegandii* Mack. (Catling *et al.* 1985).
Carex atlantica Bailey ssp. *capillacea* (Bailey) Reznicek - Revised to *C. interior* Bailey (Catling *et al.* 1985).
Carex howei Mack. - Revised to *C. interior* Bailey.
Carex interior Bailey - Widespread.
Carex umbellata Schkuhr - Revised to *C. rugosperma* Mack. (Catling *et al.* 1985).
Carex vulpinoidea Michx. - Widespread.
Crataegus jonesii Sarg. - Revised to *C. holmesiana* Ashe var. *villipes* Ashe.
Cypripedium reginae Walt. - Although rare outside western Prince Co., 9 stations are known. This species was once considered by some to be the floral emblem of PEI until 1965 when an amendment to the floral emblem act stipulated *Cypripedium acaule* (Catling *et al.* 1985).
Dalibarda repens L. - Unconfirmed (see Erskine 1960, p.176).
Diervilla lonicera Mill. - Widespread.
Echinocystis lobata L. - Introduced.
Eleocharis palustris (L.) R. & S.- Widespread.
Euphorbia supina Raf. - Introduced.
Euphrasia randii Rob. var. *randii* (*E. randii* var. *reeksii* Fern.) - Reported by Erskine (1960), Sell & Yeo (1970), Catling *et al.* (1985), but the recent taxonomic study of Downie and McNeill (1990) suggests that the recognition of infraspecific taxa in *E. randii* is unwarranted.
Euphrasia randii Rob. var. *farlowii* Rob. - Reported by Erskine (1960), Sell & Yeo (1970), but the recent taxonomic study of Downie and McNeill (1990) suggests that the recognition of infraspecific taxa in *E. randii* is unwarranted.
Euphrasia stricta Wolf *ex* J.F. Lehmann - Probably introduced (Sell & Yeo 1970).
Euphrasia tetraquetra (Biebisson) Arrondeau - Revised to *E. nemorosa* (Catling *et al.* 1985).
Fraxinus americana L. - Revised to *Fraxinus pennsylvanica* Marsh var. *subintegerrima* (Vahl) Fern.
Glyceria laxa Scribn. - The sterile hybrid of *G. canadensis* and *G. striata*.
Hieracium scabriusculum Schwein. - Revised to *H. canadense*.
Isoetes riparia Engelm. Revised to *I. macrospora* Dur.

Isoetes echinospora Dur. - Revised to *I. macrospora* Dur.
Juncus canadensis J. Gay - Widespread.
Juncus gerardii Loisel. - Widespread.
Lepidium virginicum L. - Widespread.
Listera convallarioides (Sw.) Nutt. - Widespread.
Lobelia spicata L. Reported to be introduced (Erskine 1960, p. 240).
Lycopodium tristachyum Pursh - Widespread.
Myriophyllum tenellum Bigel. - No specimen found (Catling *et al.* 1985).
Nasturtium officinale R. Br. - Revised to *N. microphyllum* (Boenn.) Reichnb., the latter probably widespread.
Nymphoides cordata (Ell.) Fernald - Revised to *Nymphaea odorata* (Catling *et al.* 1985).
Nymphaea odorata Ait. - Widespread.
Panicum subvillosum Ashe (*P. lanuginosum* Ell. var. *implicatum*) - Revised to *Dichanthelium ovale* (Ell.) Gould and Clark var. *addissonii* (Nash) Gould and Clark (Catling *et al.* 1985).
Pinus resinosa Soland. - Widespread.
Plantago juncoides Lam. var. *laurentiana* Fern. = *P. maritima* L.
Plantago maritima L. - Widespread.
Plantago oliganthos R. & S. = *P. maritima* L.
Plantago rugelii Decne. - Reported by Erskine 1960, but no specimen seen by us and not mapped in PEI by Bassett (1973). Possibly introduced to North America.
Platanthera grandiflora (Bigel.) Lindley - Revised to *P.* x *andrewsii* (Niles) Luer (Catling *et al.* 1985).
Polygonatum biflorum (Walt.) Ell. - A specimen at UPEI may be this species, but it was collected late in the season and may also be referable to *P. canaliculatum* (Muhl.) Pursh.
Polygonum cilinode Michx. - Widespread.
Potamogeton gramineus L. - No specimen found (Catling *et al.* 1985).
Potamogeton natans L. - Widespread.
Potamogeton pusillus L. var. *tenuissimus* Mert. & Koch - Widespread.
Potentilla egedii Wormsk. - Reported by Thannheiser (1981) and Scoggan (1978, as an aggregate species), but no specimen seen.
Ranunculus hispidus Michx. var. *nitidus* (Ell.) T. Duncan (*Ranunculus septentrionalis* Poir.) - Reported by Erskine (1960) on the basis of a photo (DAO) of specimen at MT (duplicated at GH, *Fernald 7487 and St. John*). The range of var. *nitidus* shown by Duncan (1980) does come near to PEI, and consequently we suspect that the specimen is better placed with var. *caricetorum* (Greene) Duncan.
Rubus allegheniensis Porter - Widespread.
Rubus amicalis Blanchard - Revised to *R. canadensis* L.
Rubus kennedyanus Fern.- recorded from PEI in Roland 1947 as *R. quaesitus* Bailey but omitted from Roland & Smith 1969, Scoggan 1978 includes it within *R. canadensis*.
Rubus perinvisus Bailey - Revised to *R. vermontanus* Blanchard.
Rudbeckia laciniata L. - Introduced.
Salix eriocephala Muhl. (*Salix rigida* Muhl.) - Widespread.
Scirpus atrovirens Willd.- Widespread.
Scirpus paludosus A. Nels. var. *atlanticus* Fern. - Revised to *S. maritimus* L. var. *paludosus* (A. Nels.) Kuek., which is widespread.
Scirpus validus Vahl - Widespread.

Silene cucubalis Wibel = *S. vulgaris* (Moench) Gracke - Introduced.

Solidago gigantea Ait. - Widespread.

Sparganium minimum (Hartm.) Fries - Listed by Erskine (1960) for Tignish and mapped by Roland & Smith (1969) for Brackley Point road and North Point, but no voucher specimens were found.

Sparganium multipedunculatum (Morong) Rydb. - Cook and Nicholls (1986) treat this as a synonym of *S. angustifolium*, but without an explanation. More research on the classification of this group is needed. Specimens from Prince Edward Island referred to *S. multipedunculatum* are at CAN, DAO, and GH.

Spiranthes lucida (H. H. Eaton) Ames - Revised to *S. cernua* (Catling *et al.* 1985).

Stellaria crassifolia Ehrh. - Widespread.

Thelypteris simulata (Davenp.) Nieuwl. - No specimen found (Catling *et al.* 1985).

Tsuga canadensis (L.) Carr. - Widespread.

Viola adunca Sm. var. *minor* (Hook.) Fern. - No specimen found, nor had Erskine (1960) seen a specimen.

Zizania palustris L. var. *palustris* - Reported by Erskine (1960) to have been introduced as duck food.

APPENDIX II.
Hybrids that are rare on Prince Edward Island.

Amelanchier x ***neglecta*** Eggleston (*A. arborea* var. *laevis* x *bartramiana*)
Aster x ***blakei*** (Porter) House (*A. acuminatus* x *nemoralis*)
Aster x ***tardiflorus*** L.
Betula x ***caerulea-grandis*** Blanchard (*B. populifolia* x *papyrifera*)
Circaea x ***intermedia*** Ehrh. (*C. alpina* x *C. lutetiana*)
Euphrasia x ***aequalis*** Callen (*E. americana* x *canadensis*)
Glyceria x ***laxa*** (Scribn.) Scribn. (*G. canadensis* x *striata*)
Hudsonia x ***spectabilis*** L.E. Morse (*H. ericoides* x *tomentosa*)
Lysimachia x ***conmixta*** Fernald (*L. terrestris* x *thyrsiflora*)
Mentha x ***gentilis*** L. (*M. arvensis* x *spicata*)
Solidago x ***asperula*** Desf. (*S. rugosa* x *sempervirens*)
Solidago x ***erskinei*** Boivin (*S. canadensis* x *sempervirens*)
Spartina x ***caespitosa*** (*S. pectinata* x *patens*)

APPENDIX III.
The rare vascular plants of Prince Edward Island in taxonomic sequence.

EQUISETACEAE

Equisetum scirpoides Michx.

ISOETACEAE

Isoetes macrospora Dur.

OPHIOGLOSSACEAE

Botrychium dissectum Spreng.
Botrychium simplex E. Hitchc.
Ophioglossum vulgatum L. var. *pseudopodum* (Blake) Farwell

OSMUNDACEAE

Osmunda regalis L. var. *spectabilis* (Willd.) Gray

POLYPODIACEAE

Polypodium virginianum L.
Woodwardia virginica (L.) Sm.

PINACEAE

Pinus banksiana Lamb.

TYPHACEAE

Typha angustifolia L.

POTAMOGETONACEAE

Potamogeton alpinus Balbis var. *tenuifolius* (Raf.) Ogden
Potamogeton filiformis Pers. var. *borealis* (Raf.) St. John
Potamogeton filiformis Pers. var. *macounii* Morong
Potamogeton foliosus Raf. var. *foliosus* (*P. foliosus* Raf. var. *macellus* Fern.)
Potamogeton pectinatus L.
Potamogeton vaginatus Turcz.

JUNCAGINACEAE

Triglochin gaspense Lieth & D. Love
Triglochin palustris L.

ALISMATACEAE

Sagittaria graminea Michx.

HYDROCHARITACEAE

Elodea nuttallii (Planch.) St. John

POACEAE

Agropyron trachycaulum (Link) Malte var. *majus* (Vasey) Fern.
Agropyron trachycaulum (Link) Malte var. *novae-angliae* (Scribn.)Fern.
Agrostis perennans (Walt.) Tuckerm.
Alopecurus aequalis Sobol.
Brachyelytrum erectum (Schreb.) Beauv. var. *septentrionale* Babel
Calamogrostis stricta (Timm) Koeler subsp. *inexpansa* (Gray) C.W. Greene (*Calamagrostis neglecta* (Ehrh.) Gaertn., Mey & Scherb.)
Danthonia compressa Austin
Deschampsia caespitosa (L.) Beauv. var. *glauca* (Hartm.) Lindm.
Distichlis spicata (L.) Greene
Elymus virginicus L.
Glyceria canadensis (Michx.) Trin.
Glyceria borealis (Nash) Batchelder
Muhlenbergia glomerata (Willd.) Trin. var. *cinnoides* (Link) F. J. Hermann.
Oryzopsis asperifolia Michx.

Oryzopsis canadensis (Poir.) Torr.
Panicum depauperatum Muhl. var. ***involutum*** (Torr.) Wood
Phragmites australis (Cav.) Trin. *ex* Steudel (*P. communis* Trin.)
Puccinellia ambigua Sorensen
Puccinellia americana Sorensen
Schizachne purpurascens (Torr.) Swallen
Sphenopholis intermedia Rydb.

CYPERACEAE

Carex annectens Bickn.
Carex aquatilis Wahl. var. ***altior*** (Rydb.) Fern.
Carex argyantha Tuckerm.
Carex chordorrhiza Ehrh.
Carex cumulata (Bailey) Mackenzie
Carex deflexa Hornem.
Carex flava L.
Carex folliculata L.
Carex gracillima Schwein.
Carex lacustris Willd.
Carex limosa L.
Carex mackenziei Krecz.
Carex pallescens L. var. ***neogaea*** Fern.
Carex recta Boott
Carex rugosperma Mackenzie
Carex tincta Fern.
Carex vesicaria L. var. ***jejuna*** Fern.
Carex vulpinoidea Michx.
Carex wiegandii Mackenzie
Dulichium arundinaceum (L.) Britt.
Eleocharis nitida Fern.
Eleocharis obtusa (Willd.) Schult.
Eleocharis ovata (Roth) R. & S.
Eleocharis pauciflora (Light.) Link
Eriophorum gracile Roth
Eriophorum viridi-carinatum (Engelm.) Fern.
Scirpus rufus (Huds.) Schrad. var. ***neogaeus*** Fern.

LEMNACEAE

Lemna trisulca L.
Spirodela polyrhiza (L.) Schleid.

ERIOCAULACEAE

Eriocaulon septangulare With.

PONTEDERIACEAE

Pontederia cordata L.

JUNCACEAE

Juncus dudleyi Wieg.
Juncus filiformis L.
Juncus militaris Bigel.

LILIACEAE

Maianthemum stellatum (L.) Link

ORCHIDACEAE

Arethusa bulbosa L.
Cypripedium calceolus L. var. ***pubescens*** (Willd.) Correll
Goodyera repens (L.) R. Br. var. ***ophioides*** Fern.
Listera cordata (L.) R. Br.
Platanthera blephariglottis (Willd.) Torr. var. ***blephariglottis*** (*Habenaria blephariglottis* (Willd.) Hooker)
Spiranthes cernua (L.) L.M.C. Rich.
Spiranthes ochroleuca (Rydb. *ex* Britton) Rydb.

SALICACEAE

Salix petiolaris Sm.

BETULACEAE

Betula pumila L. var. ***pumila***
Ostrya virginiana (Mill.) K. Koch

URTICACEAE

Laportia canadensis (L.) Gaud.
Pilea pumila (L.) Gray

Urtica procera Muhl.

SANTALACEAE

Commandra umbellata (L.)Fern.

POLYGONACEAE

Polygonum allocarpum Blake
Polygonum arifolium L. var. *pubescens* (Keller) Fern.
Polygonum punctatum Ell. var. *confertiflorum* (Meisn.) Fassett
Polygonum oxyspermum Mey. & Bunge ssp. *raii* (Bab.) Webb & Chater (*P. raii* Bab.)
Polygonum scandens L.
Rumex maritimus L. var. *fueginus* (Philippi) Dusén
Rumex maritimus L. var. *persicarioides* (L.) R. S. Mitchell
Rumex pallidus Bigel.

CHENOPODIACEAE

Atriplex franktonii Taschereau
Chenopodium macrocalycium Allen
Suaeda calceoliformis (Hook.) Moq.

CARYOPHYLLACEAE

Sagina nodosa (L.) Fenzl subsp. *borealis* Crow
Stellaria humifusa Rottb. var. *oblongifolia* Fenzl

PORTULACACEAE

Claytonia caroliniana Michx.
Montia fontana L.

CERATOPHYLLaCEAE

Ceratophyllum demersum L.

RANUNCULACEAE

Actaea pachypoda Ell.
Anemone canadensis L.
Ranunculus pensylvanicus L. f.
Ranunculus recurvatus Poir.
Thalictrum venulosum Trel. var. *confine* Fern.

PAPAVERACEAE

Dicentra cucullaria (L.) Bernh.

BRASSICACEAE

Dentaria diphylla Michx.
Draba incana L. var. *confusa* (Ehrh.) Lilj.

DROSERACEAE

Drosera intermedia Hayne

CRASSULACEAE

Crassula aquatica (L.) Schonl.
(*Tillaea aquatica* L.)

SAXIFRAGACEAE

Parnassia parviflora DC.

HAMAMELIDACEAE

Hamamelis virginiana L.

ROSACEAE

Amelanchier canadensis (L.) Med.
Amelanchier fernaldii Wieg.
Crataegus chrysocarpa Ashe
Crataegus holmesiana Ashe var. *villipes* Ashe
Geum canadense Jacq.
Geum laciniatum Murr.
Geum macrophyllum Willd.
Rosa nitida Willd.
Rubus chamaemorus L.
Rubus elegantulus Blanchard

Rubus pensilvanicus Poir.
(*R. pergatus* Bailey)
Rubus tardatus Blanchard

GERANIACEAE

Geranium robertianum L.

POLYGALACEAE

Polygala sanguinea L.

EMPETRACEAE

Corema conradii Torr.
Empetrum eamesii Fern. & Wieg. ssp. *eamesii* (Fern. & Wieg.) R. Good

GUTTIFERAE

Hypericum majus (Gray) Britton

ELATINACEAE

Elatine minima (Nutt.) Frish & Mey.

CISTACEAE

Hudsonia ericoides L.
Hudsonia tomentosa Nutt.
Lechea maritima Leggett var. *subcylindrica* Hodgdon

VIOLACEAE

Viola conspersa Reichenb.
Viola fimbriatula Sm.
Viola lanceolata L.
Viola nephrophylla Greene
Viola pubescens Ait.
Viola septentrionalis Greene

ONAGRACEAE

Circaea lutetiana L. ssp. *canadensis* (L.) Asch. & Mag.
Oenothera parviflora L.

HALORAGIDACEAE

Myriophyllum quitense H.B.K.
Myriophyllum verticillatum L.

ARALIACEAE

Aralia racemosa L.
Panax trifolius L.

APIACEAE

Osmorhiza longistylis (Torr.) DC.
Sanicula marilandica L.

PYROLACEAE

Pyrola asarifolia Michx.
Pyrola chlorantha Sw.
Pyrola minor L.

ERICACEAE

Andromeda glaucophylla Link
Arctostaphylos uva-ursi (L.) Spreng. var. *coactilis* Fern. & MacSwain
Gaylussacia dumosa (Andr.) T. & G. var. *bigeloviana* Fern.
Vaccinium uliginosum L.

MONOTROPACEAE

Monotropa hypopithys L.
Pterospora andromedea Nutt.

PRIMULACEAE

Samolus valerandi L. ssp. *parviflorus* (Raf.) Hultén
(*Samolus parviflorus* Raf.)

OLEACEAE

Fraxinus pennsylvanica Marsh var. ***subintegerrima*** (Vahl) Fern.

ASCLEPIADACEAE

Asclepias incarnata L.

CONVOLULACEAE

Cuscuta gronovii Willd.

LAMIACEAE

Teucrium canadense L.

SCROPHULARIACEAE

Mimulus ringens L.
Veronica scutellata L.

OROBANCHACEAE

Epifagus virginiana (L.) Barton
Orobanche uniflora L.

LENTIBULARIACEAE

Utricularia cornuta Michx.
Utricularia minor L.

RUBIACEAE

Mitchella repens L.

CAPRIFOLIACEAE

Viburnum lantanoides Michx.
(*V. alnifolium* Marsh)

CAMPANULACEAE

Lobelia dortmanna L.

ASTERACEAE

Antennaria howellii Greene ssp. ***canadensis*** (Greene) Bayer
Aster borealis (T. & G.) Prov.
Aster lanceolatus Willd.
Aster laurentianus Fern. var.
Aster nemoralis Ait.
Aster radula Ait.
Bidens cernua L. var. ***elliptica*** Wieg.
Bidens cernua L. var. ***oligodonta*** Fern. & St. John
Bidens connata Muhl.
Bidens heterodoxa (Fern.) Fern. & St. John
Erechtites hieracifolia (L.) Raf. var. ***intermedia*** Fern.
Erigeron philadelphicus L.
Gnaphalium viscosum HBK (*G. macounii* Greene)
Gnaphalium obtusifolium L. var. ***obtusifolium***
Hieracium canadense Michx.
Lactuca hirsuta Muhl. var. ***sanguinea*** (Bigel.) Fern.
Senecio aureus L.
Senecio schweinitzianus Nutt. (*Senecio robbinsii* Oakes)
Solidago altissima L.
Solidago flexicaulis L.
Solidago hispida Muhl.
Solidago juncea Ait.
Solidago macrophylla Pursh

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